

Claims

1. A method for detecting the presence of a hydroxyl group in sugars, which comprises reacting the sugar having a hydroxyl group which is immobilized to a solid phase, with a compound represented by the formula X-Y wherein X represents a residue of an azo dye compound, and Y represents a group capable of reacting with the hydroxyl group of the sugars.

2. A method for detecting the presence of a protected hydroxyl group in sugars, which comprises reacting the sugar having a hydroxyl group protected by a Z-CH₂-CO- group wherein Z represents a halogen or -O-SO₂-R, in which R represents an aliphatic or aromatic hydrocarbon group, which is immobilized to a solid phase, with (p-nitrobenzyl)pyridine under basic conditions.

3. A method for detecting whether or not a hydroxyl group in sugars is protected, which comprises the step of reacting the sugar having a hydroxyl group or hydroxyl group protected by a Z-CH₂-CO- group wherein Z represents a halogen or -O-SO₂-R, in which R represents an aliphatic or aromatic hydrocarbon group, which is immobilized to a solid phase, with a compound represented by the formula X-Y wherein X represents a residue of an azo dye compound, and Y represents a group capable of reacting with the hydroxyl group in the sugars; and/or reacting the above sugar with (p-nitrobenzyl)pyridine under basic conditions.

4. The method of claim 1 wherein the compound represented by the formula X-Y is N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4-[(4-nitrophenyl)azo]-benzeneamide.

5. The method of claim 3 wherein the compound represented by the formula X-Y is N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4-[(4-nitrophenyl)azo]-benzeneamide.

6. The method of claim 2 wherein the Z-CH₂-CO- group is a chloroacetyl group.

7. The method of claim 3 wherein the Z-CH₂-CO- group is a chloroacetyl group.

8. A method for monitoring the progress of a synthesis reaction of a sugar chain in the method of synthesizing a sugar chain by reacting the first sugars having a hydroxyl group which is immobilized to a solid phase, with the second sugars having a reactive group reacting with the above hydroxyl group and a protected hydroxyl group, wherein the protecting group of the hydroxyl group is a $Z-CH_2-CO-$ group wherein Z represents a halogen or $-O-SO_2-R$, in which R represents an aliphatic or aromatic hydrocarbon group, and the presence of a hydroxyl group or a protected hydroxyl group in sugars which is immobilized to a solid phase is detected by the reaction of the sugar with a compound represented by the formula X-Y wherein X represents a residue of an azo dye compound, and Y represents a group capable of reacting with the hydroxyl group in sugars, or (p-nitrobenzyl)pyridine.